

REMARKSAmendments

In the descriptive part of the specification, the Abstract has been amended and now is in only one paragraph. A replacement Abstract is attached.

In the claims, claims 1 and 2 have been amended to recite that the planar wiring is printed on the substrate (claim 1) or the propagation medium (claim 2). Claim 4 has been amended to delete the multiple dependencies. Furthermore, in order to eliminate multiple dependencies, new dependent claims 16 to 21 have been added. Basis for claim 16 is found in original claim 3; basis for claim 17 is found in original claim 4; basis for claims 18 to 20 is found in original claim 5; and basis for claim 21 is found in original claim 6. (Note that there are currently 19 claims pending in the application, as no claims 8 or 9 were presented originally or in the Preliminary Amendment.)

The amendments to the claims have been made solely to more clearly define and recite the present invention. The amendments are not in any way related to the Examiner's rejection based on prior art or any applied or cited prior art. These amendments have been made in the interest of rapid prosecution and without prejudice to Applicants' right to prosecute claims of similar or different scope to the unamended claims in one or more continuation applications.

The Objection to the Specification

Applicants respectfully traverse the objection to the Abstract, in view of the amended Abstract.

The Abstract has been put in a single paragraph, phraseology used in patent claims (e.g. "comprises" and "said") has been amended, and the Abstract has been shortened.

The Objection to Claim 5

Applicants respectfully traverse the objection to Claim 5, insofar as the objection is applicable to the amended claim.

Claim 5 has been amended to delete the multiple dependency on another multiply dependent claim.

The Rejection Under 35 USC § 102(e)

Applicants respectfully traverse the rejection of claims 1 to 3, 6, 10, and 15 under 35 USC § 102(e) as anticipated by Kambara et al. (U.S. Patent No. 6,091,406), insofar as the rejection is applicable to the amended claims.

The present invention is directed to an acoustic contact detecting device or a coordinate input device of touch type in which a planar wiring is used to supply electrical power to an acoustic wave transducer (of the detecting device) or a bulk wave generation means (of the input device). The planar wiring is printed on the substrate of the detecting device or on the propagation medium of the input device, and allows a device to be produced with high reliability and efficiency, in contrast to the use of cable wiring used in conventional devices. (See page 4, lines 8 to 25 of the specification.)

Kambara et al. discloses a grating transducer in which a piezoelectric vibrator is adhered to a back surface of a glass substrate, and a diffraction grating is arranged on a top surface. See the discussion of Japanese Laid-Open Publication No. Hei 10-240443 (a counterpart of the '406 patent) on page 3, line 24 to page 4, line 12 of the specification. As is stated on page 4, lines 8-12 of the specification, the cable wiring disclosed in that document, and thus in Kambara, inhibits manufacturability ("a factor inhibiting the improvement of the productivity"), and leaves the device mechanically "fragile". There is no teaching in Kambara that planar wiring should or could be used in an acoustic contact detecting device or a coordinate input device of touch type, and, indeed, the wiring disclosed in Kambara is described as "wire cables (not shown in FIGS. 5 and 6)" (column 22, lines 16-18); and "bond wire 36" (column 30, line 57), and is shown in Figure 8, as element 36, which is clearly a wire protruding via solder 34 from piezoelectric 32, and not planar wiring. The Examiner relies on column 19, lines 45-50, to show planar wiring. However, Applicants contend that equating "planar wiring" with "wire cables" is improper, and that no planar wiring is shown anywhere in Kambara, still less planar wiring that is printed directly on the substrate.

The Rejection Under 35 USC § 103(a)

Applicants respectfully traverse the rejection of claims 4, 7, 13, and 14 under 35 USC § 103(a) as unpatentable over Kambara et al. (U.S. Patent No. 6,091,406) in view of Grunwald et al. (U.S. Patent No. 5,009,708), insofar as the rejection is applicable to the amended claims.

As the Examiner admits, Kambara does not specifically teach that the wiring is printed on the substrate or propagation medium, as is recited in the present claims. (See discussion of claim 7 on page 6, second full paragraph of the Office Action.) However, the deficiencies of Kambara are not resolved by the addition of Grunwald. Grunwald et al. discloses an electrically conductive paste of specific properties for application onto a substrate, e.g. a ceramic substrate used to produce a tubular combustion exhaust gas sensor. While Grunwald teaches that his paste can be used to manufacture “conductive connecting tracts or electrodes” (column 3, lines 5-6), Applicants contend that it would not be obvious to combine Kambara with Grunwald to achieve the present invention. There is no suggestion in Kambara that the wiring (in the form of cables) is insufficient, and therefore, there would be no reason why one skilled in the art would look to another document to solve a problem that is not suggested.

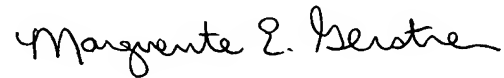
Applicants respectfully traverse the rejection of claims 11 and 12 under 35 USC § 103(a) as unpatentable over Kambara et al. (U.S. Patent No. 6,091,406) in view of Ishikawa et al. (U.S. Patent No. 5,250,869), insofar as the rejection is applicable to the amended claims.

The deficiencies of Kambara are not resolved by the addition of Ishikawa. Ishikawa et al. discloses an ultrasonic transducer for controlling an ultrasonic beam. The electrodes of the piezoelectric vibrator are changed in shape in order to adjust the ultrasonic beam characteristic. However, there is nothing in Ishikawa directed to the use of planar wiring, or any teaching that the use of planar wire would provide an improved touch input device. In fact, the wiring and electrical connections shown in Ishikawa are directed to wires (see element 75 in Figure 1, described as an “electrode lead wire” (column 1, lines 16-19). Therefore, there is no reason that one of ordinary skill in the art would look to combine Ishikawa with Kambara, especially as there is no suggestion in either document of an issue with the type of wiring described.

Conclusion

It is believed that this application is now in condition for allowance and such action at an early date is earnestly requested. If, however, there are any outstanding issues which can be usefully discussed by telephone, the Examiner is asked to call the undersigned.

Respectfully submitted,

A handwritten signature in cursive script, reading "Marguerite E. Gerstner".

Marguerite E. Gerstner
Registration No. 32,695
Telephone (650) 361-2483